UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,763	11/21/2001	Jayesh S. Patel	2376.1002-002	1710

21005   7590   03/31/2004

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER
MCFADDEN, SUSAN IRIS

ART UNIT	PAPER NUMBER
2655	6

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/991,763	PATEL ET AL.
	Examiner	Art Unit
	Susan McFadden	2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-43* is/are pending in the application.

    4a) Of the above claim(s) *44-65* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 8 is objected to because of the following informalities: " an apparatus"

should be two separate words. Appropriate correction is required.

Double Patenting

2.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11
F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA
1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*,
418 F.2d 528, 163 USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application. See 37 CFR 1.130(b).
        Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

3.   Claims 1-23 are rejected under the judicially created doctrine of obviousness-

type double patenting as being unpatentable over claims 1-17 of U.S. Patent No.

6,393,390. Although the conflicting claims are not identical, they are not patentably

distinct from each other because they both claim a system comprising: providing an

encoder including a pitch predictor and a source excitation codebook, the pitch predictor

having various parameters and being a multi-tap pitch predictor utilizing a codebook

subdivided into a least a first vector codebook and a second vector codebook, using the

pitch predictor, removing certain redundancies in a subject speech signal and vector

quantizing the pitch predictor parameters; and using the source excitation codebook,

indicating pulses in the subject speech signal by deriving corresponding vector values

(claims 1,4,5, of the instant application reads on claim 1 of 6,393,390).

In regard to claims 2,9, and 16, the open loop derivation is shown in patented

claim 16.

In regard to claims 3,10, and 17, the single-pass derivation is shown in patented

claim 17.

In regard to claims 6,13, and 20, the closed loop derivation is shown in patented

claim 2.

In regard to claims 7,14, and 21, the optimization is shown in patented claim 14.

In regard to claims 8 and 11, a system comprising: a pitch predictor and a source

excitation codebook, the pitch predictor having various parameters and being a multi-

tap pitch predictor utilizing a codebook subdivided into a least a first vector codebook

and a second vector codebook, using the pitch predictor, removing certain

redundancies in a subject speech signal and vector quantizing the pitch predictor

parameters; and using the source excitation codebook, indicating pulses in the subject

speech signal by deriving corresponding vector values is shown in claim 7 of 6,393,390.

In regard to claim 12, the product code vector quantization is shown in patented

claim 8.

In regard to claims 15 and 18, a system comprising: an electronic device having

a working memory and digital processor, and encoder executable in the working

memory, a pitch predictor and a source excitation codebook, the pitch predictor having

various parameters and being a multi-tap pitch predictor utilizing a codebook subdivided

into a least a first vector codebook and a second vector codebook, using the pitch

predictor, removing certain redundancies in a subject speech signal and vector

quantizing the pitch predictor parameters; and using the source excitation codebook,

indicating pulses in the subject speech signal by deriving corresponding vector values is

shown in claim 15 of 6,393,390.

In regard to claim 19, the product code vector quantization is shown in patented

claim 15.

In regard to claims 22 and 23, Patel et al. do not specifically show that the

electronic device can be a person communication device that is selected from a group

consisting of secure telephones, cellular phones, answering machines, voicemail, and

digital memo recorders. The Examiner takes Official Notice that one of ordinary skill in

the art would know that a person communication device can be any of the items listed

above.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 24- 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Patel

et al. (6,014,618).

In regard to claims 24,33,42, and 43, Patel et al. show a system having a working

memory and digital processor for multi-tap pitch prediction, a method and device

comprising: an electronic device, an adaptive codebook (Fig. 4, item 11), a pitch predictor with coefficients (item 29, col. 4, ln 35-44), and adjusting the adaptive codebook with a contribution from the adaptive codebook in combination with the predictor coefficients, the predictor coefficients being selected by searching the at least one pitch predictor codebook (col. 5, col. 8).

In regard to claims 25-27 and 34-36, Patel et al. show that filtering (weighted synthesis filtering) the combination and computing an error signal between a target speech signal and the filtered combination (Fig. 2a,2b, col. 3, ln 40-50).

In regard to claims 28-29 and 37-38, Patel et al. shows a lag factor is a function of the error signal (M, col. 4, ln 21-67).

In regard to claims 30-31 and 39-40, Patel et al. show a method where the vector quantized parameters are quantized using product code vector quantization (col. 2, ln 54-60) and conventional vector quantization (Fig. 4, col. 3, ln 17-18).
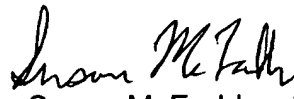
In regard to claims 32 and 41, Patel et al. show the searching includes linear predictive analysis by synthesis searching (col. 1, ln 10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan McFadden whose telephone number is 703-308-6693. The examiner can normally be reached on Monday-Friday, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Susan McFadden
Primary Examiner
Art Unit 2655

March 25, 2004